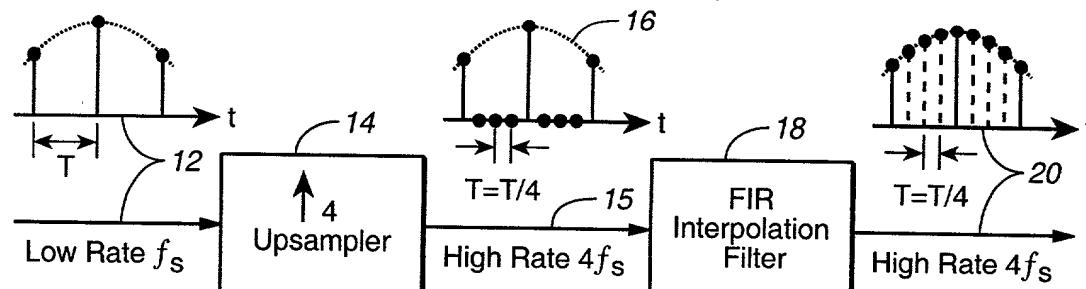
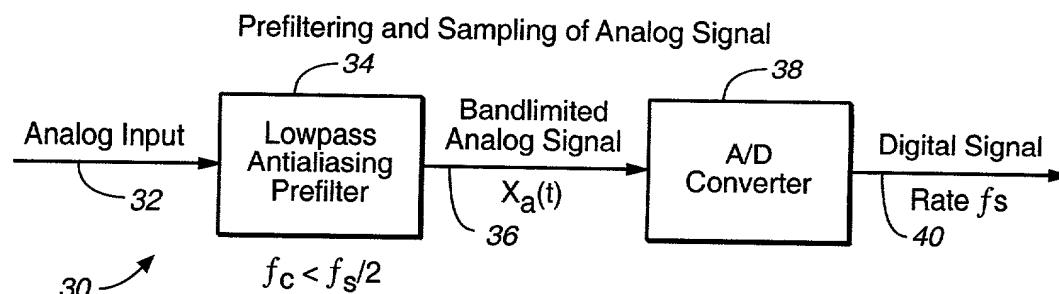
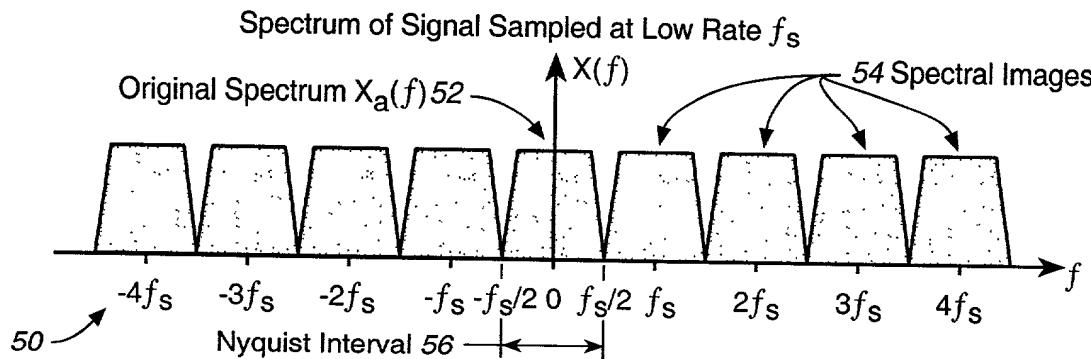
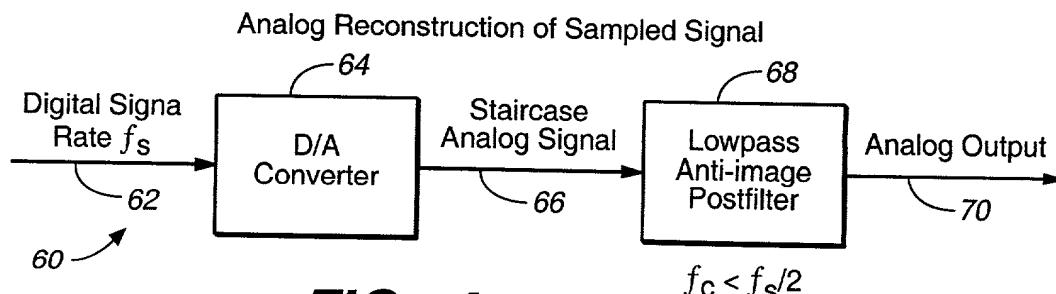


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Sampling Rate Increase with Digital Interpolation

**FIG.-1 (PRIOR ART)****FIG.-2 (PRIOR ART)****FIG.-3 (PRIOR ART)****FIG.-4 (PRIOR ART)**

Ideal Reconstructor Removes Spectral Images Due to Sampling

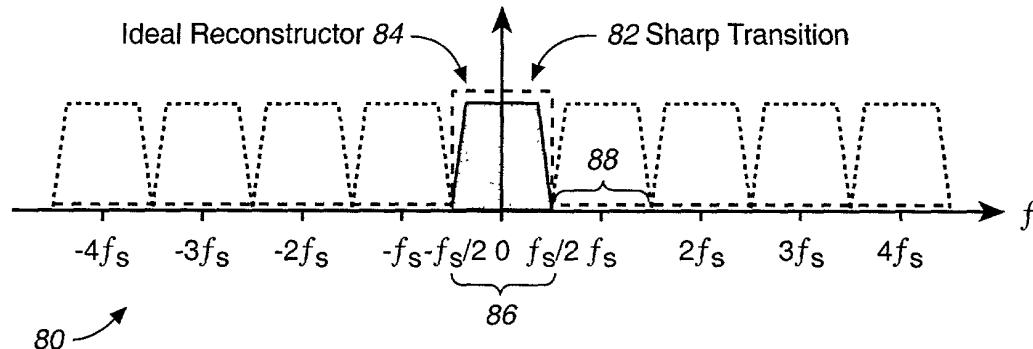


FIG.-5 (PRIOR ART)

Spectrum of Signal Resampled at High Rate $4f_s$, and Postfilter Requirements

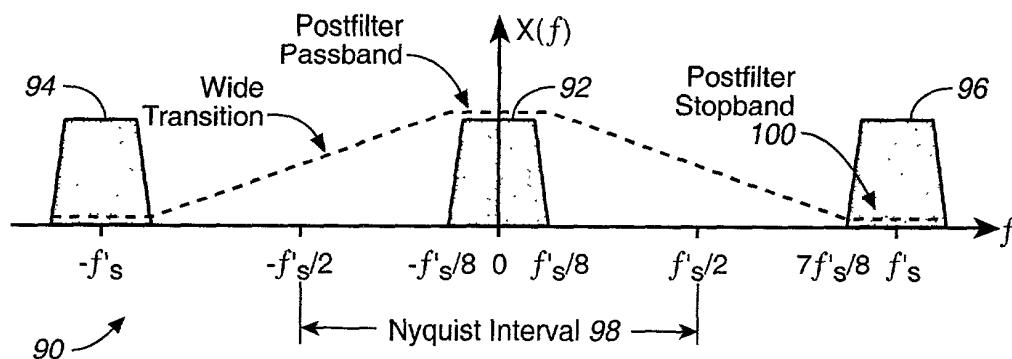


FIG.-6 (PRIOR ART)

Spectrum of Low-Rate Samples with Respect to High Rate $4f_s$

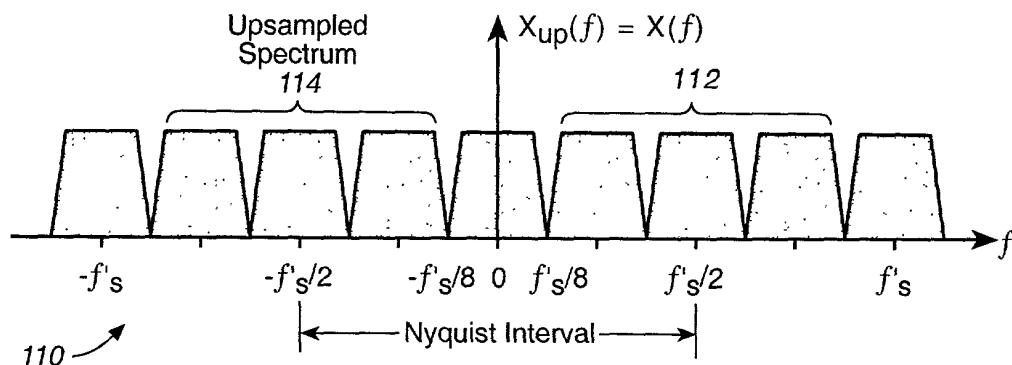


FIG.-7 (PRIOR ART)

High-Rate FIR Interpolator Removes Intermediate Spectral Images

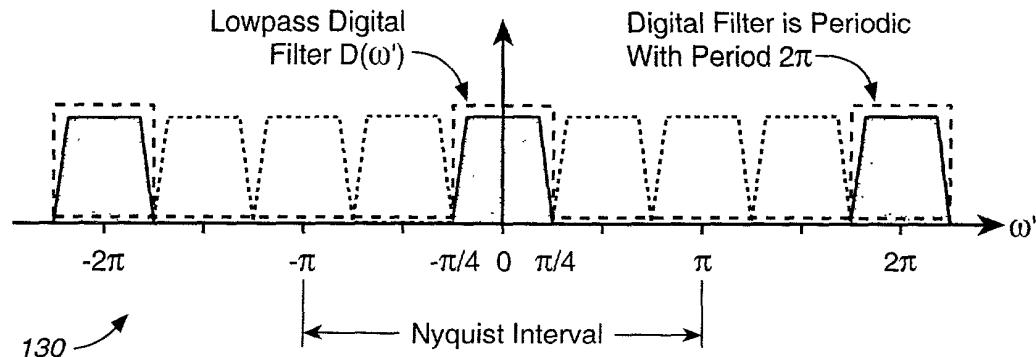


FIG._8A (PRIOR ART)

High-Rate FIR Interpolator Removes Intermediate Spectral Images

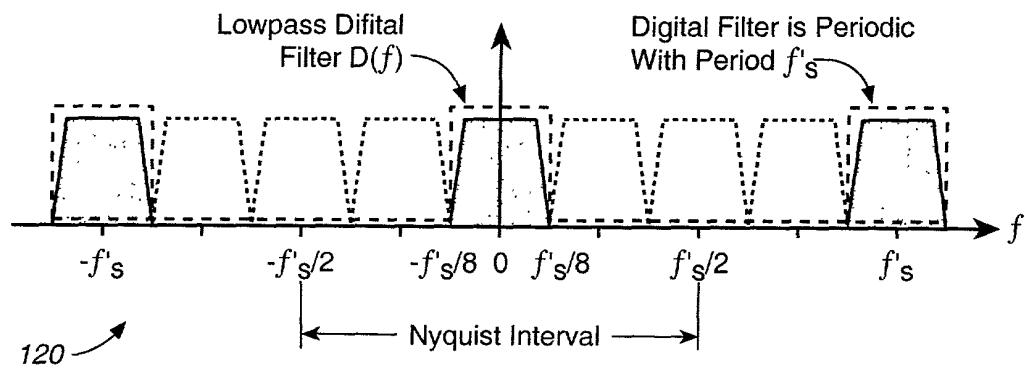


FIG._8B (PRIOR ART)

4-Times Oversampling Digital Filter Helps Analog Reconstruction

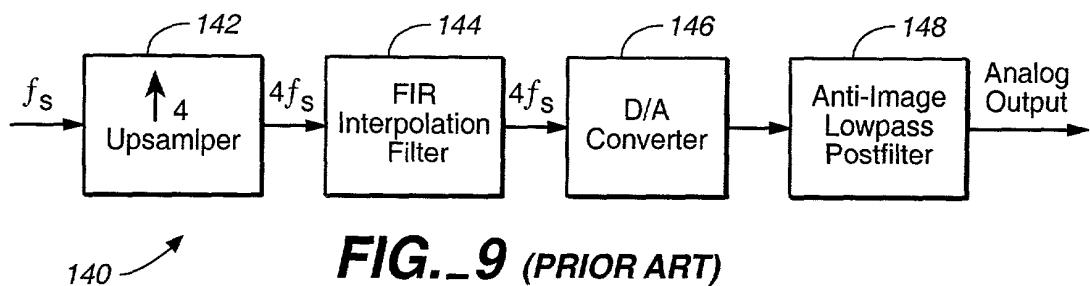


FIG._9 (PRIOR ART)

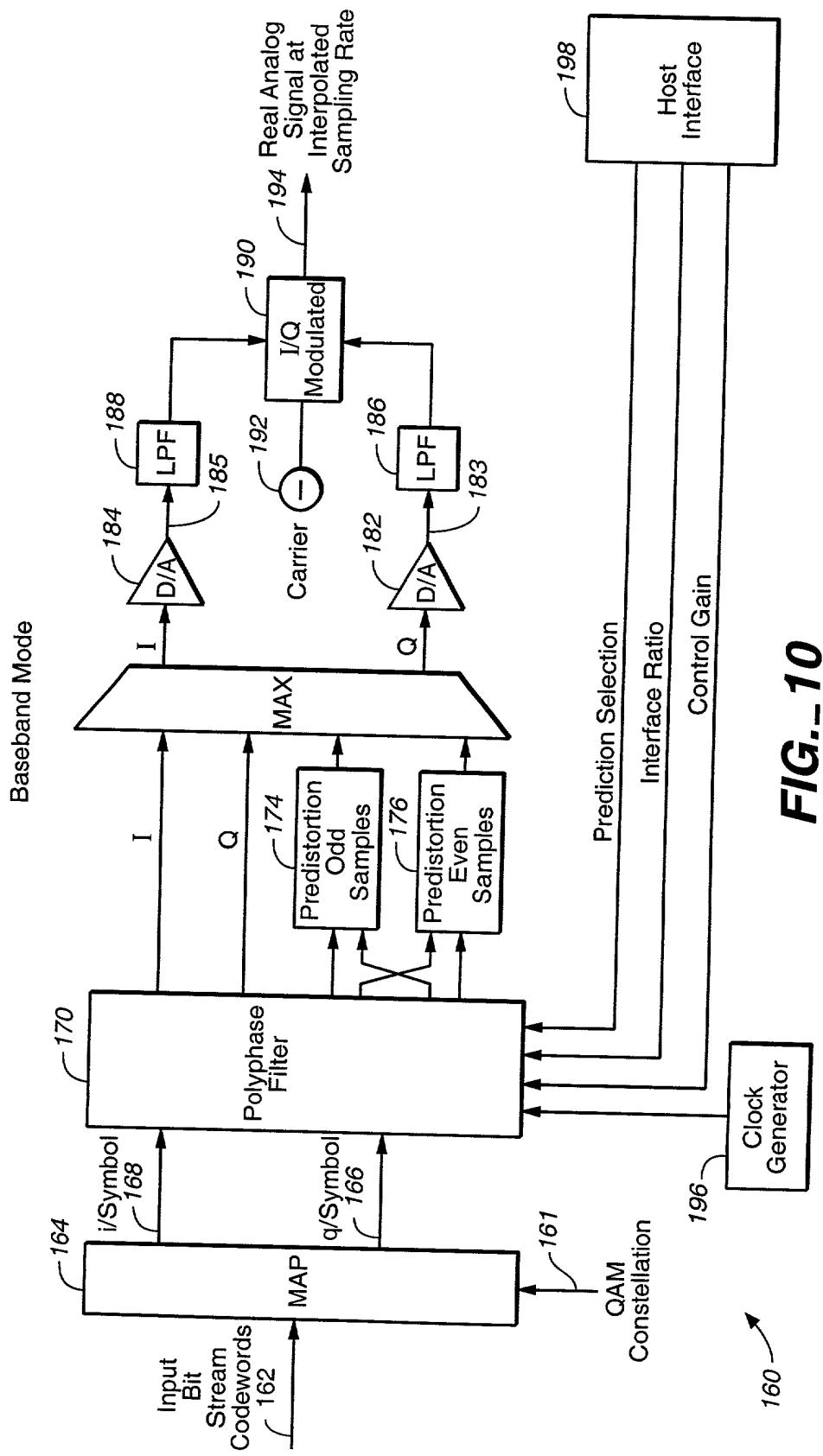
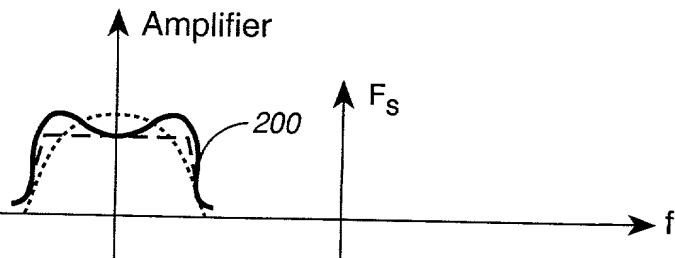
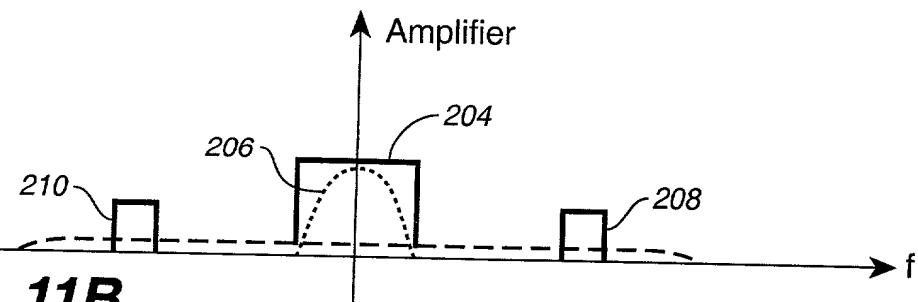


FIG.-10

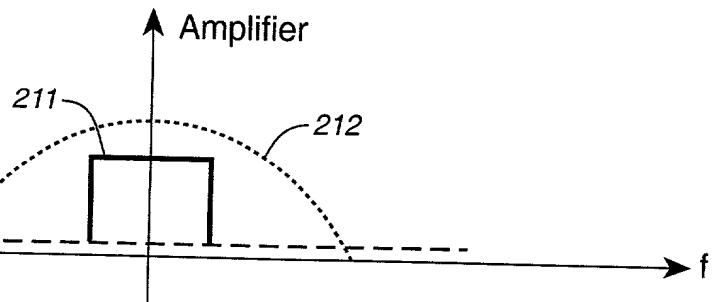
Baseband Mode

**FIG. 11A**

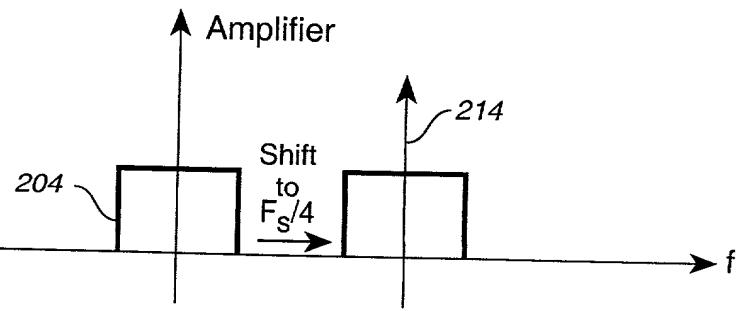
Baseband Mode

**FIG. 11B**

Baseband Mode

**FIG. 11C**

Baseband Mode

**FIG. 11D**

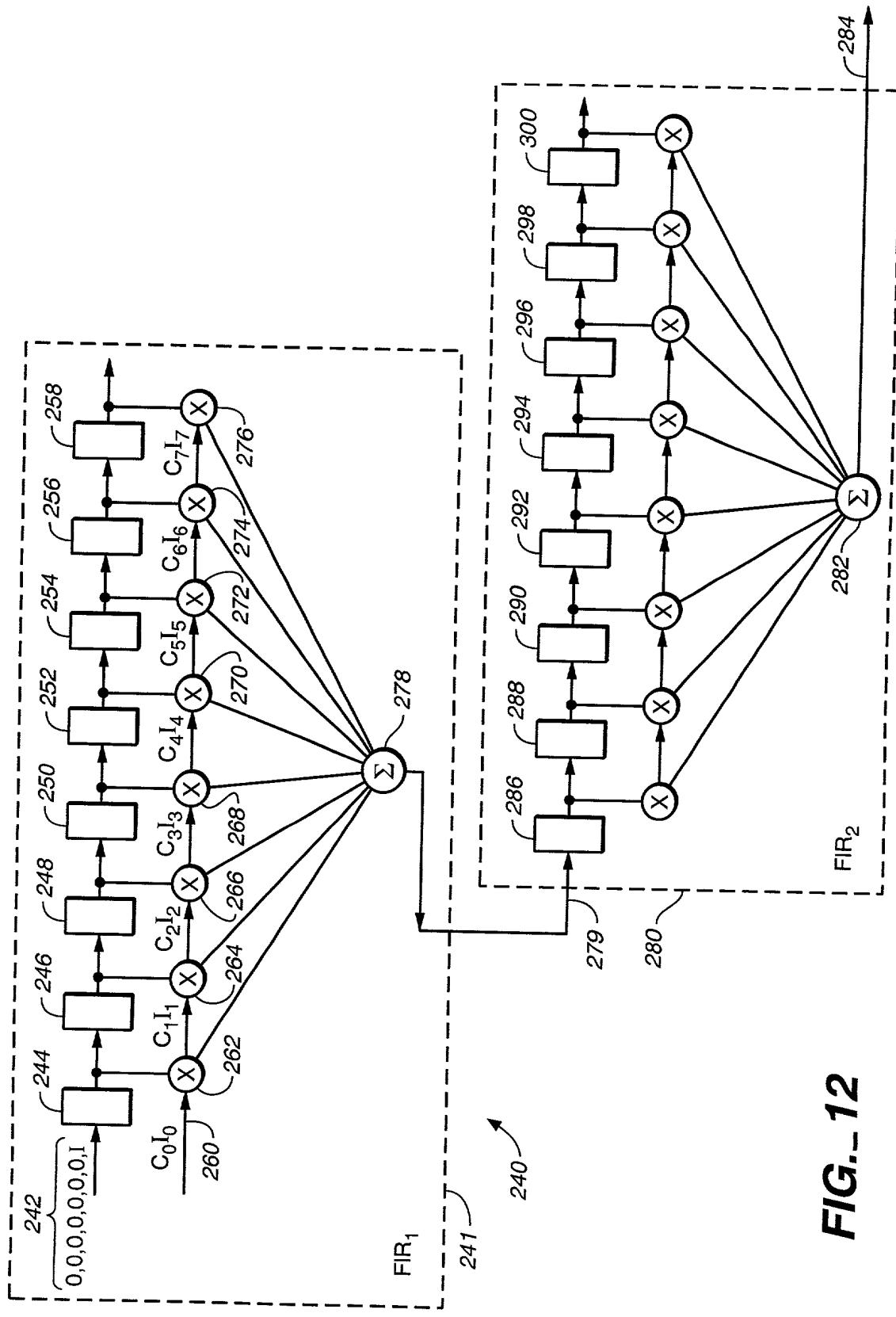


FIG. 12

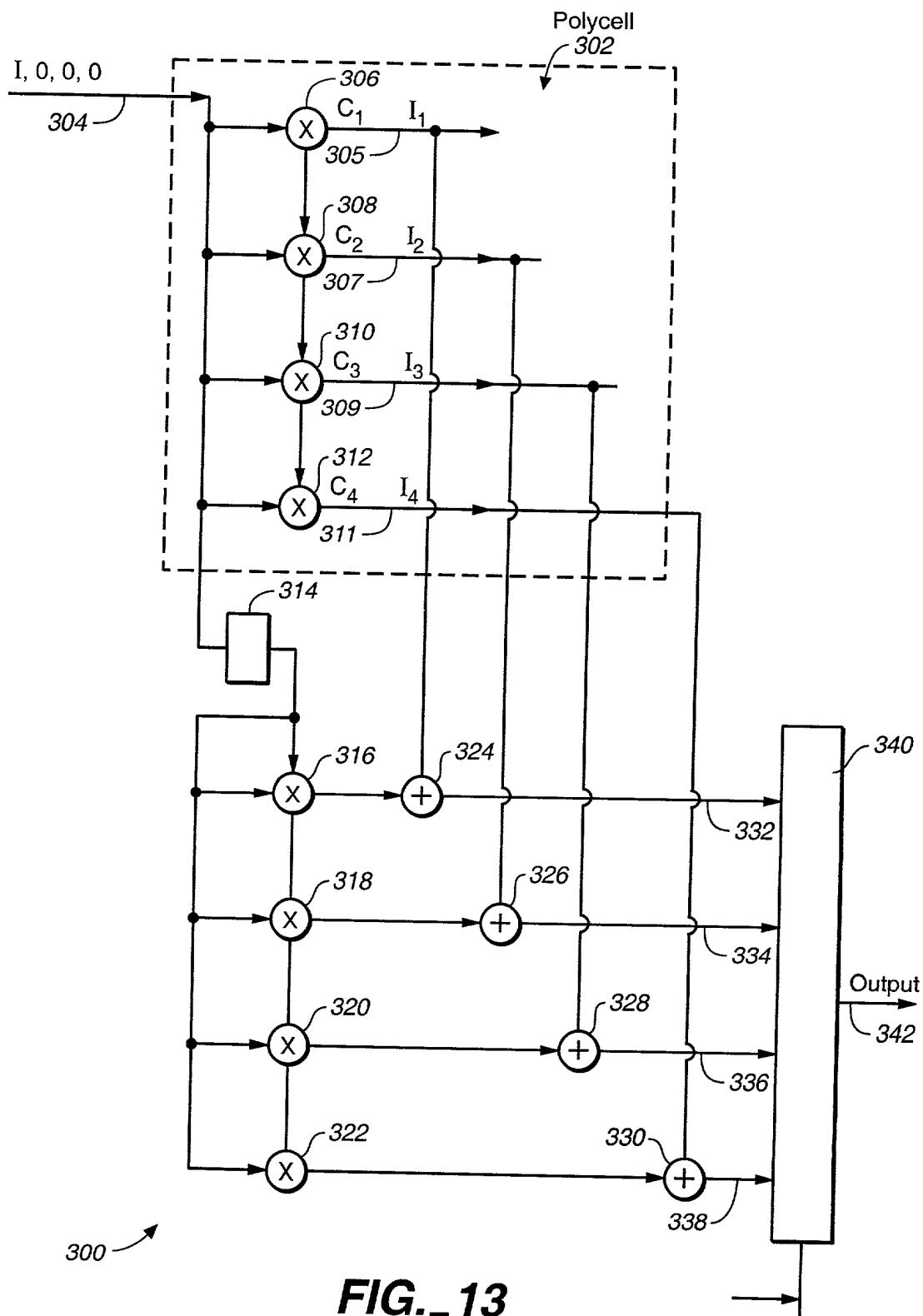
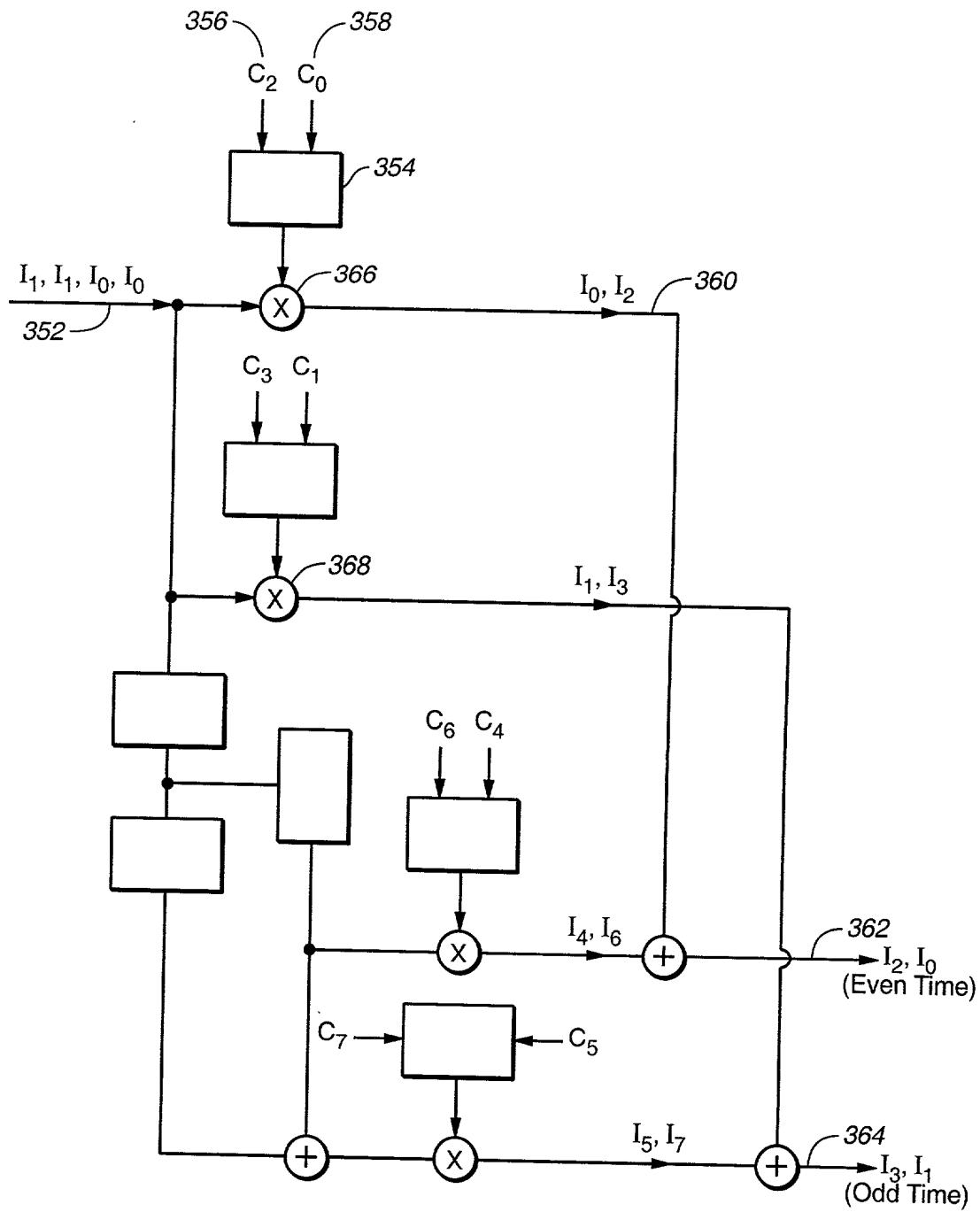


FIG. 13



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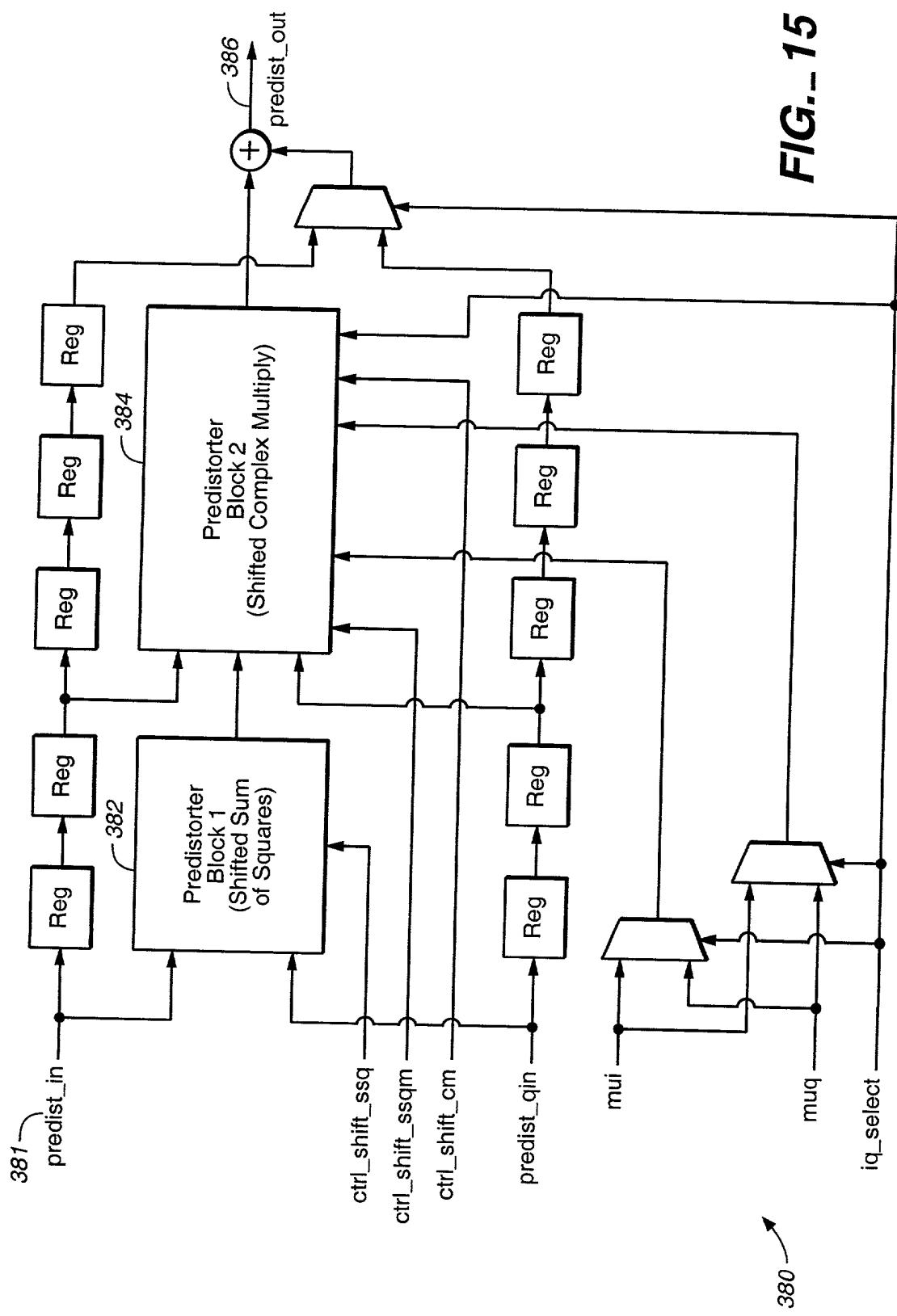


FIG. 15

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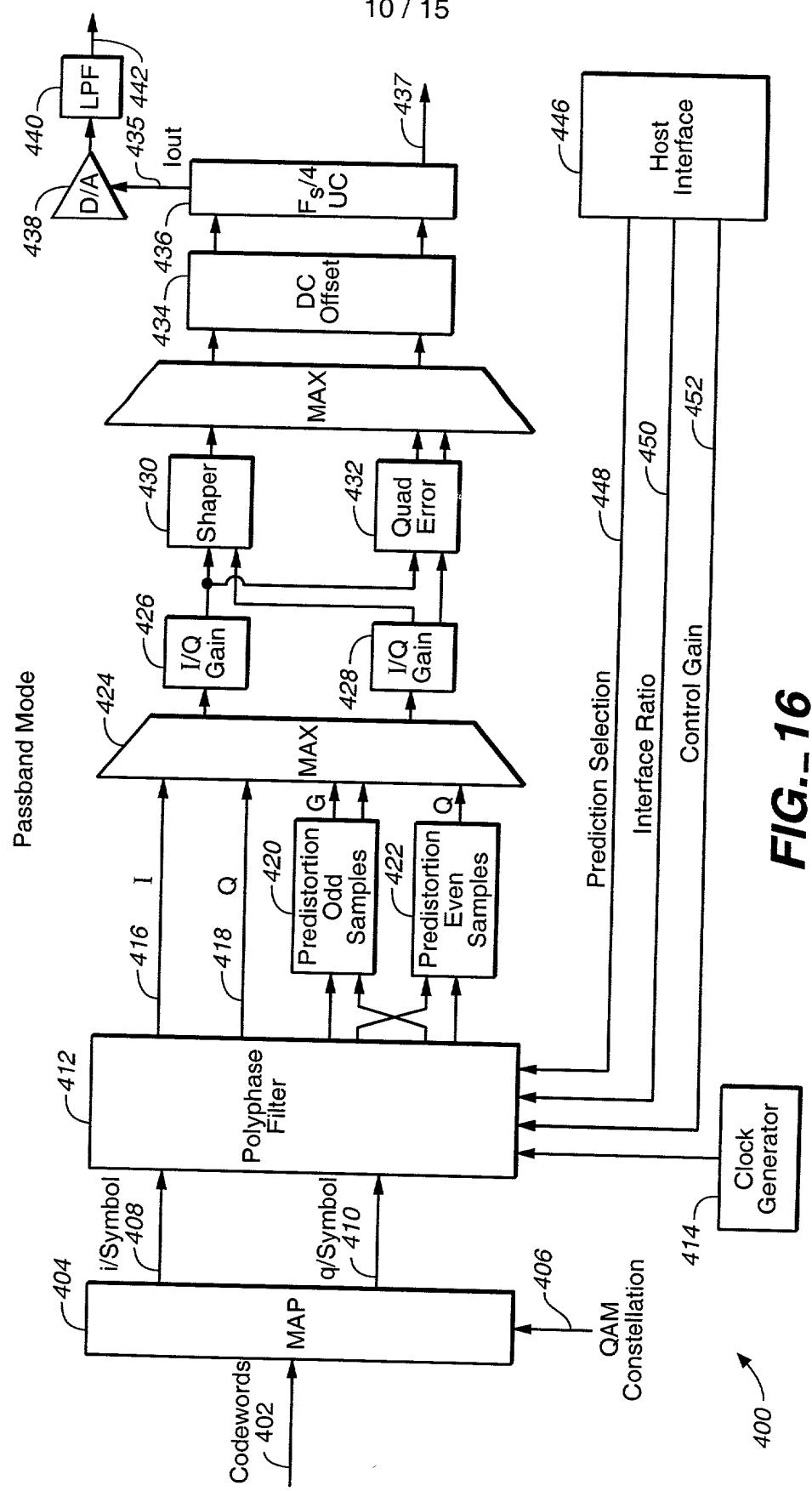
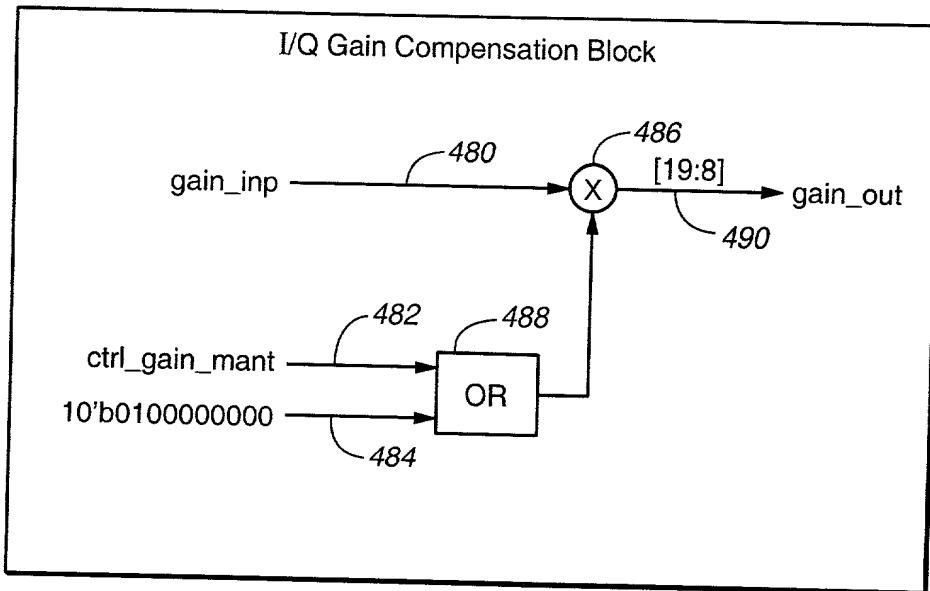
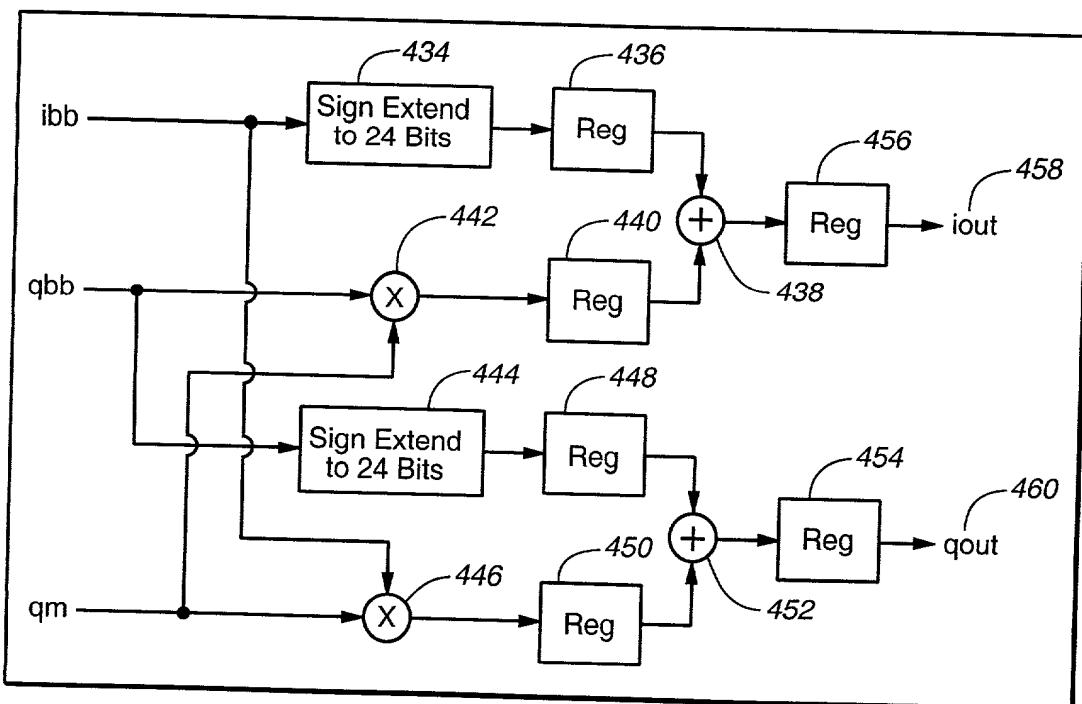


FIG.-16

**FIG. 17****FIG._18**

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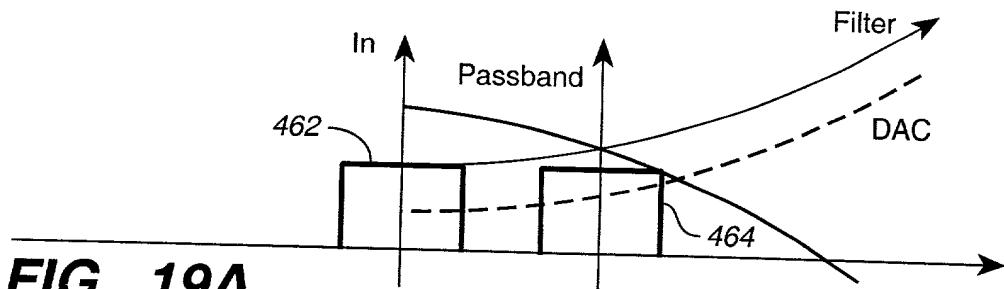
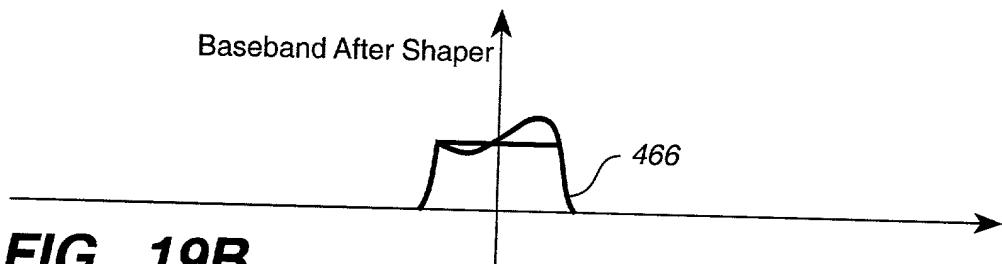
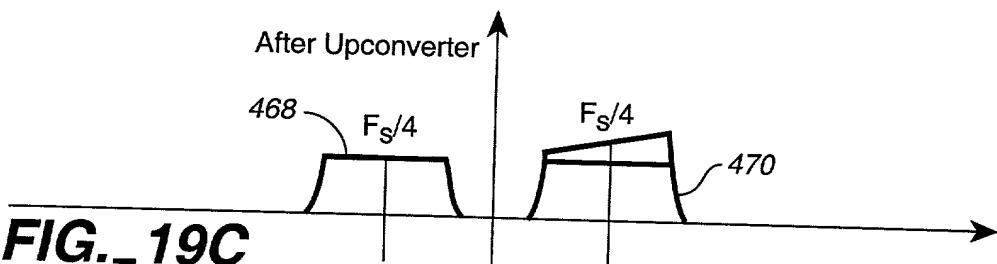
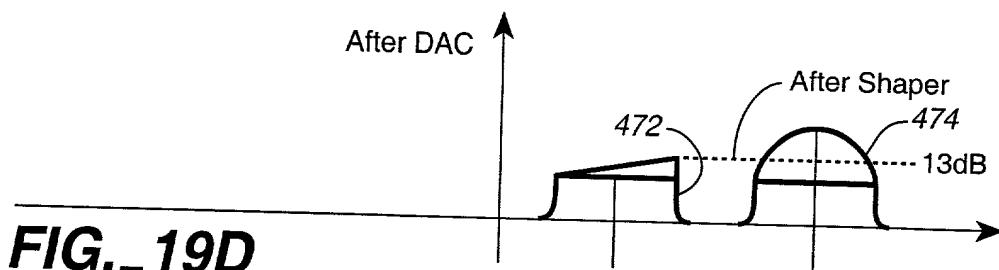
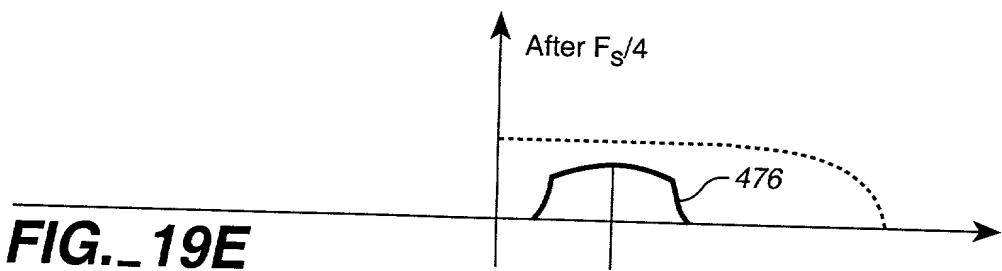
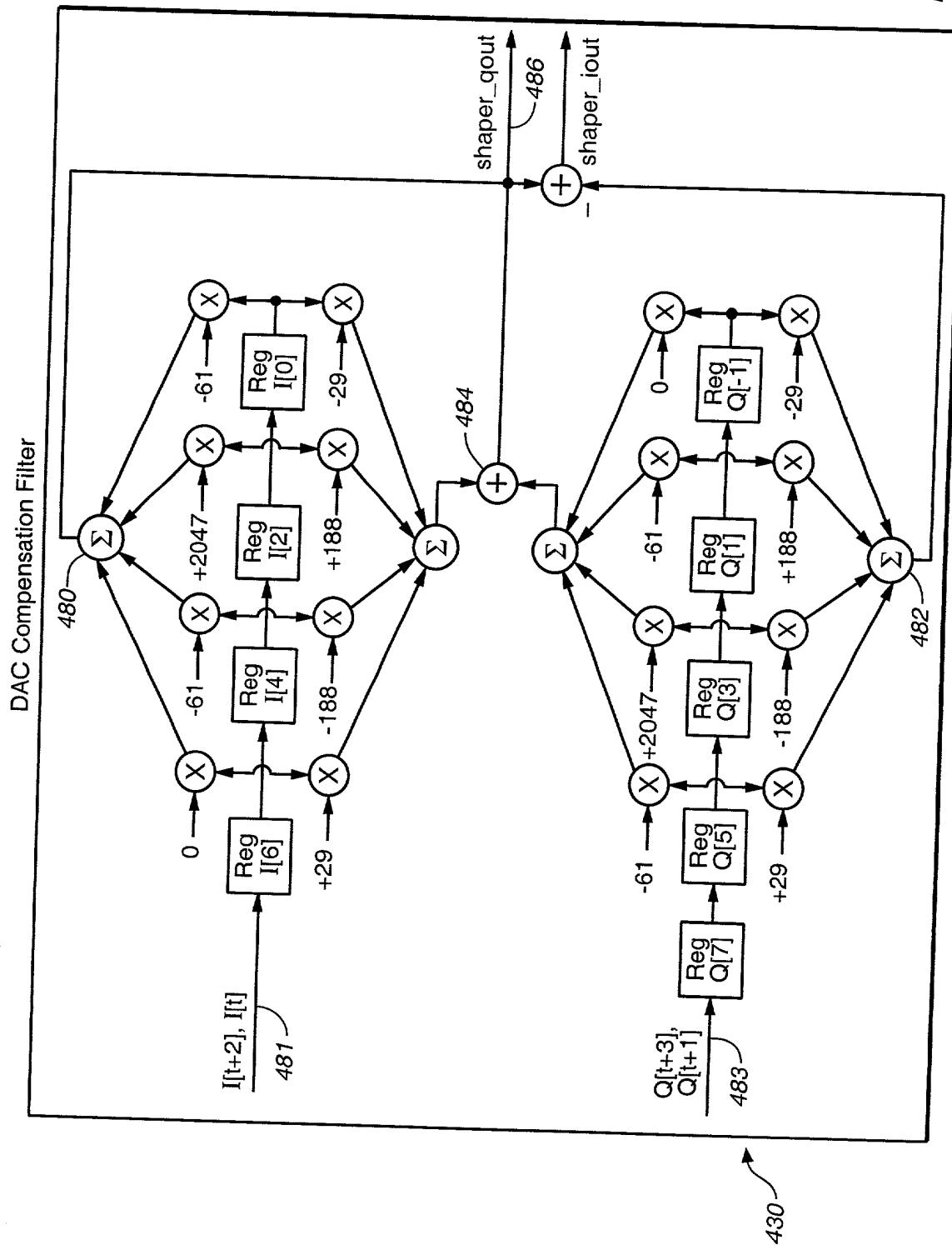
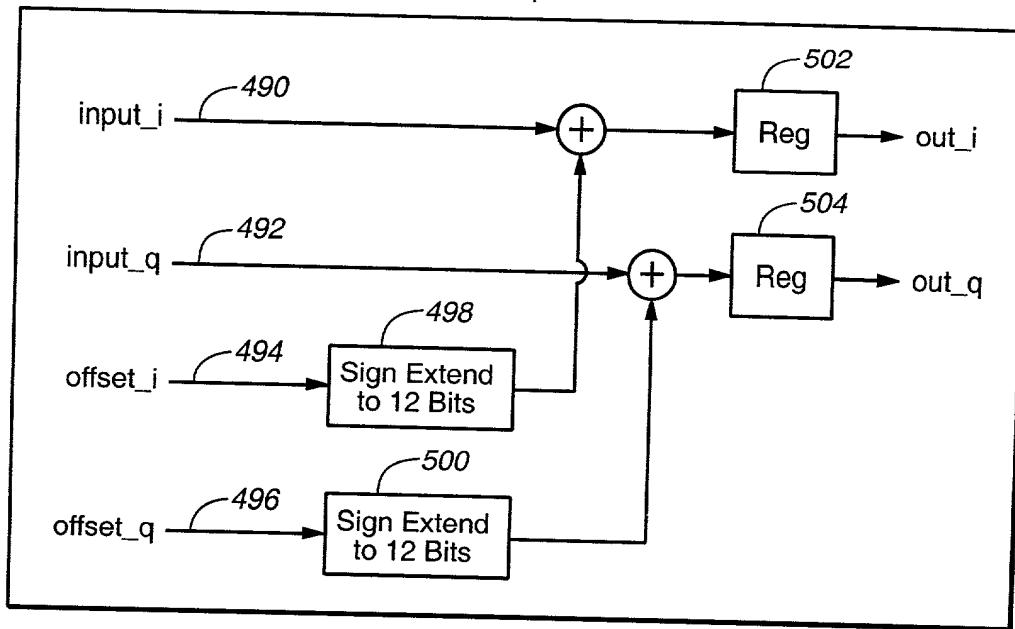
**FIG._19A****FIG._19B****FIG._19C****FIG._19D****FIG._19E**

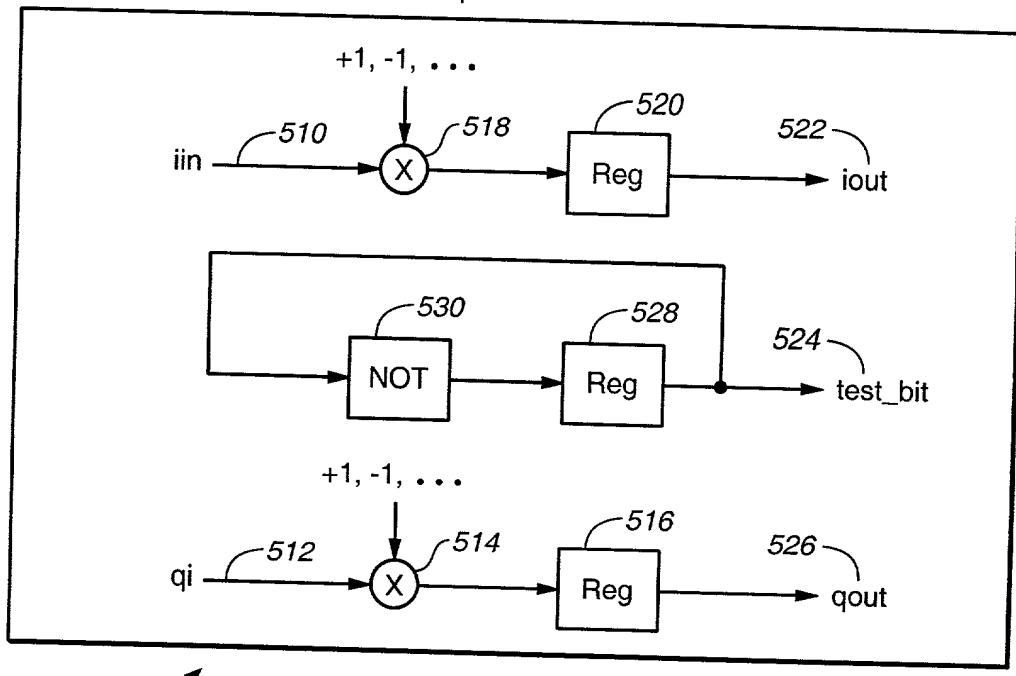
FIG.-20

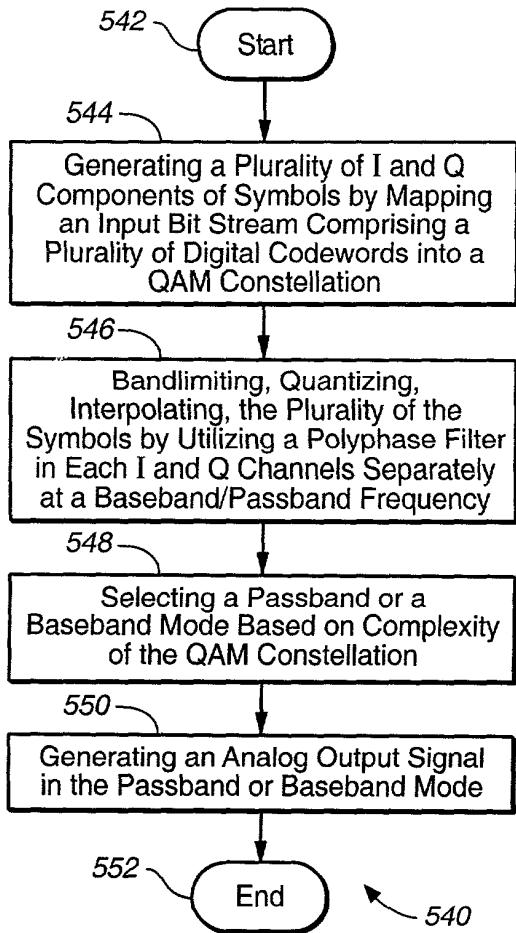
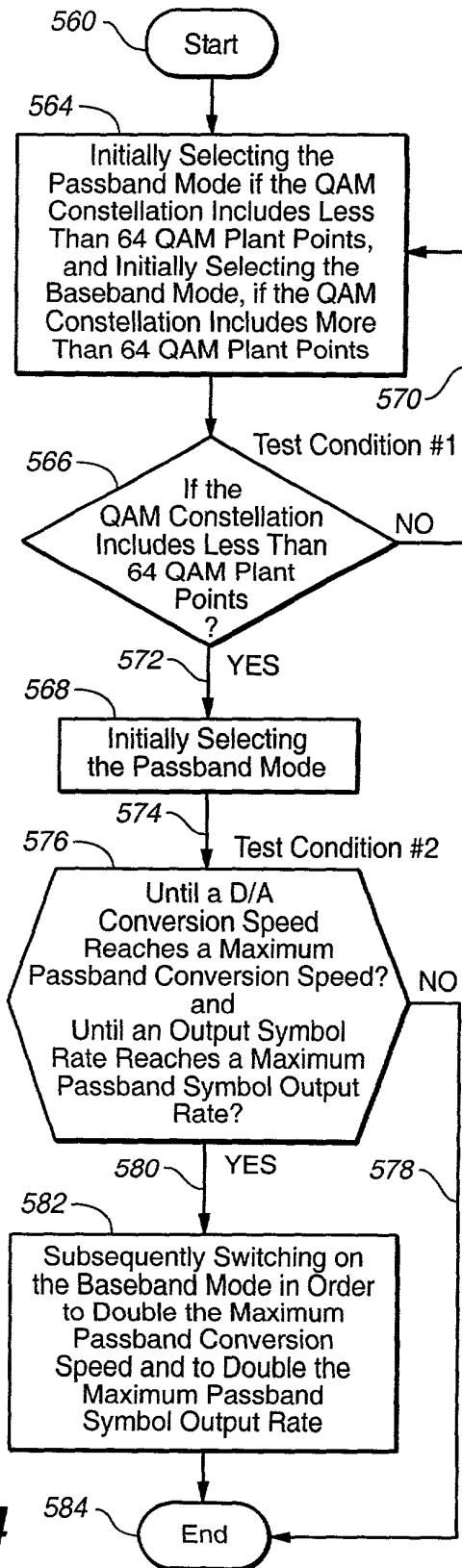


DC Offset Compensation

**FIG._21**

Fs/4 Upconverter

**FIG._22**

**FIG. 23****FIG. 24**